<u>REMARKS</u>

INTRODUCTION:

In accordance with the foregoing, the specification has been amended to update the status of the parent application, claims 142, 149-153 and 155 have been amended without narrowing the scope of the claims, and claims 156-174 have been added.

No new matter is being presented, and approval and entry of the foregoing amendments and new claims are respectfully requested.

Claims 142 and 149-174 are pending and under consideration. Reconsideration is requested.

REJECTION UNDER 35 U.S.C. §102:

    1.   <u>Rejection of claim 155 in view of Mitsuno</u>

In the Office Action at page 2, the Examiner rejects claim 155 under 35 U.S.C. §102(e) in view of <u>Mitsuno</u> (U.S. Patent No. 6,219,311). This rejection is respectfully traversed and reconsideration is requested.

While the Examiner asserts that <u>Mitsuno</u> qualifies as prior art under 35 U.S.C. §102(e), it is unclear how <u>Mitsuno</u> qualifies as prior art. Specifically, <u>Mitsuno</u> issued on April 17, 2001, and has an indicated 35 U.S.C. §102(e) date of October 19, 1999, which is consistent with the fact that publication of the PCT application on which <u>Mitsuno</u> claims PCT benefit is in Japanese. The instant application was filed domestically on May 24, 2000 based on an earlier filed application, U.S. patent application no. 09/304,279, which was filed on May 3, 1999. As such, the date of invention in the instant invention is at least May 3, 1999. Since this date of invention is prior to the <u>Mitsuno</u> 102(e) date of October 19, 1999, <u>Mitsuno</u> does not qualify as prior art under 35 U.S.C. 102(e). As such, it is respectfully requested that the Examiner reconsider and withdraw the rejection.

    2.   <u>Rejection of claim 155 in view of Mine</u>

In the Office Action at pages 2-3, the Examiner rejects claim 155 under 35 U.S.C. §102(e) in view in view of <u>Mine</u> (U.S. Patent No. 5,966,358). This rejection is respectfully traversed and reconsideration is requested.

By way of review, claim 155 recites, among other features, "recording and/or reproducing a real time file requiring real time recording and/or reproduction on a recording medium according to real time recording and/or reproduction information for ensuring real time reproduction." Claim 155 additionally recites that "the real time recording and/or reproduction information includes a size of minimum contiguous storage blocks."

By way of review, Mine discloses a method of recording data sequentially using a type of error processing (slipping processing) which does not require certification pre-processing. Specifically, as noted in col. 2, lines 45-57, certification pre-processing was performed and was a process that could take an hour.   Mine asserts that the slipping method set forth in Mine does not require such certification, which therefore does not interfere with recording moving pictures so as to allow recording on a real time basis since the certification pre-processing (i.e., the process which takes an hour prior to recording) is not performed. (Col. 3, lines 20-25 and 58-63, col. 7, lines 1-7, col. 8, lines 25-35). However, Mine does not suggest that the recorded information includes any specific information that ensures real time reproduction.

Instead, Mine discloses recording using a Universal Disk Format (UDF) file system. In order to perform recording, Mine teaches that, as data is being recorded, it is determined in operation S5 whether a defective sector is found. The data affected by the defective sector is recorded in a slipping process in operation S7 by which the affected data is recorded in a next error-free sector. The data recording continues at the next address and the defective sector is stored in a random access memory 24. At the end of the recording in operation S8, defect lists, which are based on the defects stored in the random access memory 24, are written to the disk, and the management information for the UDF system is updated in operation S10. (Col. 7, lines 34-38, 51-62, col. 8, lines 1-23; FIG. 3). As such, Mine teaches a process which allows recording without certification, but does not disclose the recorded information relies on information which ensures real time recording or reproduction, or whether the recorded information includes sizes of blocks being recorded.

Moreover, while Mine discloses using sectors into which recording units are to be recorded, these sectors are used for the purposes of addressing in order to manage data to be recorded using a file system having logical addresses which is being recorded onto a storage medium having physical addresses. Mine does not suggest that these sectors, or the recording units to be recorded thereon, include or are managed to ensure that the recorded data are reproduced in real time.

Additionally, as also noted in the Amendment of July 10, 2003 in relation to the rejection of claim 142, the UDF system in effect at the time of Mine was UDF Specification, Rev. 2.0. This version of the UDF Specification did not suggest using real time information in the manner recited in claim 155. It was only subsequent to the filing of the instant application that UDF Specification, Rev. 2.01, was established which even suggests using real time files in the UDF system. Prior to version 2.01, the UDF file system was not compatible with the use of real time files since previous UDF systems required verifying data integrity after writing to the disc. This

type of verification is not necessary or usable in relation to real time recording and reproduction. As such, the data recorded in the sectors is not managed to ensure that the data is recorded or reproduced in real time since the UDF system existing at that time did not have such a capacity.

As such, it is respectfully submitted that Mine does not disclose or suggest the invention recited in claim 155.

  3. Rejection of claim 155 in view of Yasui

On page 3 of the Office Action, the Examiner rejects claim 155 under 35 U.S.C. §102(e) in view of Yasui (U.S. Patent No. 5,999,505). The rejection is respectfully traversed and reconsideration is requested.

By way of review, Yasui teaches a magnetooptical disc 804 which is divided into plural sectors for the purposes of addressing. Each sector has a number for the purposes of addressing, and a size of each sector is set as 2352 bytes. (Col. 7, lines 28-35). During recording and reproducing, the data is managed in clusters, with each cluster being 36 sectors as shown in FIG. 5. (Col. 7, lines 35-47). Moreover, while Yasui teaches using a Real Time Flag in a segment allocation table 800, the Real Time Flag does not include information on a number of sectors or clusters, or that such a number relates to ensuring real time recording or reproduction. Specifically, the segment allocation table 800 shown in FIG. 6 includes a file name, the address of the start cluster for the file, and length of the file to be recorded and reproduced according to the Real Time Flag. Yasui uses the Real Time Flag to allocate a buffer memory 4 to buffer at least two clusters so that the file is processed in a time continuous manner. (Col. 7, line 54 to col. 8, line 15, col. 10, lines 8-20). However, since Yasui teaches that the indicated length of the file corresponds to the total size of the file, the indicated length in the sector allocation table 800 does not relate to a minimum set of sectors in which data is stored. Moreover, since the size of the clusters is standardized and is used for time-continuous and time-discontinuous recording and reproduction, the clusters do not relate to real time recording or reproduction.

As such, it is respectfully submitted that Yasui does not disclose the invention recited in claim 155.

  4. Rejection of claim 155 in view of Gotoh et al.

On page 3 of the Office Action, the Examiner rejects claim 155 under 35 U.S.C. §102(e) in view of Gotoh et al. (U.S. Patent No. 6,292,625). The rejection is respectfully traversed, and reconsideration is requested.

By way of review, Gotoh et al. discloses recording AV data in ECC blocks, with each ECC block having 16 sectors. In order to record the AV data, a continuous area large enough to

handle the AV file is detected. Once the area is located, the AV data is recorded in ECC blocks. Where a defective sector is encountered, the ECC block with the defective sector is skipped and a next ECC block is used for recording. The location of the skipped ECC block is recorded in the file management system. As shown in C7 of FIG. 3, the file entry of the AV file includes a descriptor which indicates whether a particular extent of ECC blocks is an AV file or whether the ECC block is a defective extent. The file management system is ISO/IEC 13346 compliant. (Col. 10, lines 9-34 & line 65 to col. 11, line 9). Gotoh et al. teaches that, by replacing skipping defective ECC blocks encountered during recording in a continuous area, the track buffer of the disk reproduction apparatus is able to continuously reproduce data from a ECC block buffered in the track buffer while data is not being reproduced from the disk.

However, since Gotoh et al. assumes that the defective ECC block will be sufficiently close to allow continuous reproduction, Gotoh et al. cannot ensure continuous reproduction based on information recorded in the file management system. Specifically, if multiple ECC blocks contain defects such that the buffered ECC blocks are reproduced before a next non-defective ECC is searched for and determined, the AV file will be interrupted and therefore not be reproduced in real time since the track buffer does not contain sufficient ECC blocks to allow continuous reproduction. Moreover, the use of the allocation descriptor shown in C6 in FIG. 3 does not ensure real time reproduction since the descriptor merely discloses which ECC blocks are not readable without guaranteeing that the next usable ECC block can be accessed and read before the track buffer runs out or otherwise ensuring that the AV file can be reproduced in real time. Lastly, while the allocation descriptor merely describes which ECC blocks are a defective extent, the allocation descriptor does not record a minimum number of ECC blocks which are contiguous. As such, while Gotoh et al. relies on a proximity between non-defective ECC blocks for real time reproduction, Gotoh et al. does not disclose information which ensures real time reproduction.

Additionally, since Gotoh et al. uses standard ECC blocks managed using an ISO/IEC 13346 type file system, the disclosed file system does not include information which ensures real time recording and/or reproduction for reasons similar to those why the UDF file system then existing does not include information ensure real time recording and/or reproduction. Thus, in order to ensure real time reproduction, Gotoh et al. requires that a continuous area be found which will accommodate the entire file. As such, Gotoh et al. does not disclose a minimum number ECC blocks needed to ensure real time reproduction, or that the file descriptors include information on a number of ECC blocks.

Lastly, since Gotoh et al. relies on standard ECC blocks, Gotoh et al. does not disclose

that there is information recorded as to the size of the ECC blocks, or that the size of the ECC blocks relates to real time recording or reproduction since the same ECC blocks are used for non-real time recording or reproduction.   Instead, Gotoh et al. teaches storing addresses of defective ECC blocks in the file entry as well as addresses of non-defective ECC blocks for the same AV file. (Col. 8, lines 41-56). There is no disclosure that the file entry includes the size of an ECC block or a size of contiguous ECC blocks needed to perform real time reproduction.

As such, it is respectfully submitted that Gotoh et al. does not disclose the invention recited in claim 155.

5.   Rejection of claims 142, 149-151 and 153 in view of Gotoh et al.

On pages 4-5 of the Office Action, the Examiner rejects claims 142, 149-151 and 153 under 35 U.S.C. §102(e) in view of Gotoh et al. The rejection is respectfully traversed, and reconsideration is requested.

Among other features, the Examiner asserts that col. 7, lines 22-23 and FIG. 3 disclose real time recording and/or reproducing information which ensures real time recording and/or reproducing and that is recorded in a file type field of an (ICB) TAG field of a Universal Disk Format (UDF) system.

It is respectfully submitted that, for reasons similar to those set forth above in relation to the rejection of claim 155 in view of Gotoh et al., since Gotoh et al. teaches using information as to which portions of a contiguous set of ECC blocks are not to be read, the file entry shown in FIG. 3 does not ensure real time reproducing since Gotoh et al. relies on the existence of a number of contiguous ECC blocks sufficient to record an entire file. Thus, the file entry of the AV file does not ensure that reproduction is performed in real time. Moreover, the use of the allocation descriptor shown in C6 in FIG. 3 does not ensure real time reproduction since the descriptor merely discloses which ECC blocks are not readable without guaranteeing that the next usable ECC block can be accessed and read before the track buffer runs out or otherwise ensuring that the AV file can be reproduced in real time. As such, it is respectfully submitted that Gotoh et al. does not disclose or suggest "recording and/or reproducing a real time file requiring real time recording and/or reproduction on a recording medium according to real time recording and/or reproduction information for ensuring real time reproduction" as recited in claim 142.

In addition, even assuming arguendo that Gotoh et al. teaches the use of a UDF system, it is noted that Gotoh et al. does not suggest using information indicating real time reproduction/recording of data in the management information of the UDF system. Specifically, a file entry C6 includes an allocation descriptor C7 that indicates that the recorded data in a particular continuous extent is AV data, defective data, or padding information. A flag is further

set in bit 9 of the ICB TAG field shown in FIG. 26 indicating that the data is a contiguous AV file. As such, during reproduction of the AV data, the file location information in the file entry C6 and C7 can be used to reproduce the AV data relying on defect management information recorded in a defect management area. (Col. 10, line to col. 11, line 9-34; FIGs. 2, 3, and 26 of Gotoh et al.) However, beyond identifying the data as file as being contiguous and the locations of portions of the AV data to be reproduced, Gotoh et al. does not suggest that the ICB TAG identifies that the information ensures real time reproduction.

Moreover, as also noted above in relation to the rejection of Mine, the file management system of the then existing UDF does not provide information identifying the AV data as being real time data. Specifically, the version of the UDF and the ICB TAG known at the time of Gotoh et al. did not include an attribute that allowed an indication that the AV data was to be recorded or reproduced in real time. As also similarly noted in the Amendment of July 10, 2003 in relation to the rejection of claim 142, the UDF system in effect at the time of Mine and Gotoh et al. was UDF Specification, Rev. 2.0, which did not suggest using real time information in the manner recited in claim 142. In this version, the UDF system was not compatible with the use of real time files since previous UDF systems required verifying data integrity after writing to the disc. However, while appropriate for non-real time files, this type of verification is not necessary or usable in relation to real time recording and reproduction. As such, the file system referenced in Gotoh et al. does not contain real time information in the ICB TAG field such that, assuming arguendo Gotoh et al. teaches real time information, Gotoh et al. does not disclose that any such real time information is in the ICB TAG field. Therefore, the ICB TAG disclosed in FIGs. 25 and 26 of Gotoh et al. does not disclose or suggest real time information that ensures real time reproduction and instead relies upon the structural relationship between recording areas in order to attempt to provide real time reproduction.

Thus, it is respectfully submitted that Gotoh et al. does not disclose or suggest, among other features, "recording and/or reproducing the real time recording and/or reproduction information in a file type field in an (ICB) TAG field of a file entry for a universal disk format (UDF) system" as recited in claim 142.

Claims 149-151 and 153 are deemed patentable due at least to their depending from claim 142.

<u>REJECTION UNDER 35 U.S.C. §103:</u>

       1.   Rejection of claims 142, 149, and 150 in view of Mine, Yasui, and the Universal
            Disk Format Specification

In the Office Action at pages 5-7, the Examiner rejects claims 142, 149, and 150 under 35 U.S.C. §103 in view of <u>Mine</u>, <u>Yasui</u>, and OSTA, Universal Disk Format Specification (2.0). The rejection is respectfully traversed and reconsideration is requested.

Among other features, the Examiner asserts that col. 7, lines 20-30 and col. 8, lines 15-20 of <u>Mine</u> teaches recording and/or reproduction information for ensuring real time reproduction and/or recording and also teaches storing the recording time recording and/or reproduction information in a file entry of a UDF system. As a point of clarification and as similarly noted above in relation to the rejection of claim 155 in view of <u>Mine</u>, <u>Mine</u> does not disclose information that ensures real time recording and/or reproduction. Specifically, <u>Mine</u> teaches removing a pre-certification operation in order to accelerate recording, but does not otherwise suggest that a piece of information is used to ensure that the recorded data is reproduced in real time. Additionally, since the UDF filed system then in existence did not have a capacity for ensuring real time reproduction, <u>Mine</u> does not disclose that such information is in the file entry of the UDF system.

Additionally, <u>Yasui</u> also does not disclose the use of a UDF system, or where in a UDF system a Real Time Flag should be disposed.

In order to cure this deficiency, the Examiner cites to section 2.3.5 of the Universal Disk Format Specification, which the Examiner asserts teaches that the ICB tag field is well known. However, as similarly noted in the Preliminary Amendment filed December 24, 2003 and July 10, 2003, <u>Mine</u> does not suggest which field should be used for storing real time information. There is no suggestion in either <u>Yasui</u> or <u>Mine</u> that an ICB TAG field as defined in section 2.3.5 of the Universal Disk Format Specification should be used, and the Examiner has not provided evidence that such a suggestion exists in the prior art to cure the deficiency of the combination as set forth in the amendments filed July 10, 2003 and December 24, 2003.

Additionally, the Examiner's reliance on the existence of the ICB TAG field does not cure the above noted deficiency since there remains no motivation to use this particular field as opposed to the remaining fields found and described in the UDF specification then in existence.

In general, an unsubstantiated statement that existing elements could be combined as it was in the skill of the art to do so does not provide a basis for a rejection under 35 U.S.C. 103(a). <u>In re Fine</u>, 5 USPQ2d 1596 (Fed. Cir. 1988). Similarly, an unsubstantiated statement that elements could be combined as being "common sense" does not provide a basis for a

rejection under 35 U.S.C. §103(a) since such unsupported statements prevent meaningful review under the Administrative Procedures Act, 5 U.S.C. §706. In re Zurko, 59 USPQ2d 1693 (Fed. Cir. 2001). Therefore, in order to establish a prima facie case for obviousness, the rejection must detail the existence of the individual elements at the time of invention, that there was an existing motivation to combine these elements contained in the then existing art, and that this motivation is beyond an unsupported statement that the combination of these elements was within the skill of the art or that the elements were well known. In essence, there needs to be proof that such a motivation exists, not conjecture. This rigorous proof is required in order to prevent the trap of impermissible hindsight.

It is respectfully submitted that there is insufficient evidence of a motivation to record the Real Time Flag of Yasui in the ICB YAG field disclosed in the UDF format specification as is required to maintain a prima facie rejection of claim 142.

Claims 149 and 150 are deemed patentable due at least to their depending from claim 142.

2.   Rejection of claims 152 and 154 in view of Gotoh et al. and Nakamura

In the Office Action at pages 7-8, the Examiner rejects claims 152 and 154 under 35 U.S.C. §103 in view of Gotoh et al. and Nakamura et al. (U.S. Patent No. 5,745,645). The rejection is respectfully traversed and reconsideration is requested.

As an initial point of clarification, the Examiner does not rely on Nakamura et al. as curing the above-noted deficiency of Gotoh et al. as applied to claim 142, from which claims 152 and 154 depend. As such, it is respectfully submitted that the combination of Gotoh et al. and Nakamura et al. does not disclose or suggest the invention recited in claim 152 and 154 due at least to their depending from claim 142.

Additionally, the Examiner relies on col. 40, lines 60-65 of Nakamura et al. as disclosing recording bit rate information for a video block of a file for continuous reproduction of the video data. By way of review, Nakamura et al. discloses an encoding information table generated by a system controller 200 based on scenario data St7. The encoding information table is shown in FIG. 27 and is used for reproduction of interleaved blocks according to user-defined scenarios whereby different blocks are reproduced according to a user selection of one of plural scenes as shown in FIG. 33. In order to manage the multi-angle scene/multi-angle reproduction, Nakamura et al. teaches the use of an ILVU_MT, which defines a reproduction time for a smallest interleave unit when reproduced at a maximum bit rate without a track buffer experiencing an underflow during interleaved block reproduction. (Col. 40, lines 2-21 and 60-65 of Nakamura et al.)

As a motivation to make the combination, the Examiner asserts that one of ordinary skill in the art would have been motivated to use the ILVU_MT and maximum bit rate information of Nakamura et al. in the device of Gotoh et al. to enable the real time file to be continuously reproduced. However, it is noted that the Examiner does not cite to a source for such an assertion. Moreover, it is noted that, while disclosed as being useful in the context of multi-angle/multi-scene data reproduction for managing interleaved blocks, there is no suggestion in Nakamura et al. that the ILVU_MT and maximum bit rate information would be useful in ensuring real time reproduction of one of the video blocks or of a video title, or that the ILVU_MT would ensure real time reproduction of one of the AV files disclosed in Gotoh et al.

There is further no suggestion that such information should be included in an (ICB) Tag field.

As noted above, in order to substantiate a prima facie obviousness rejection, the Examiner needs to establish that a motivation existed in the prior art to make the combination, and that the motivation needs to be more than an assertion that such a combination could be made. Since the Examiner does not provide a source for the motivation as set forth in the Office Action, it is respectfully submitted that there is insufficient evidence of record to maintain a prima facie obviousness rejection of claims 152 and 154 in view of Gotoh et al. and Nakamura et al.

PATENTABILITY OF NEW CLAIMS:

Claims 156-174 are deemed patentable due at least to their depending from corresponding claims 142 and 155.
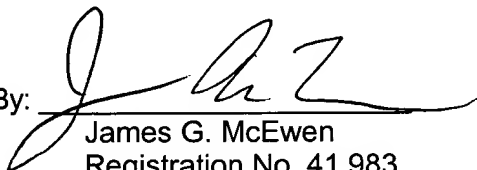
CONCLUSION:

In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot. And further, it is respectfully submitted that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any additional fees associated with the filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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